Appl. No. 10/643,312
Amdt. dated December 29, 2005
Reply to Office Action of September 1, 2005

PATENT

REMARKS/ARGUMENTS

Claims 1, 3-7, 10, and 11 remain pending in the instant application. Claims 1, 3, 4, 5, 7, and 10 have been amended. Support for the amended claims can be found in the specification as originally filed. No new matter has been introduced by virtue of these amendments.

In the latest office action, a double patenting rejection of claims 1 and 10 by the Examiner required claims 1 and 10 to maintain a clear line of demarcation between claims 1 and 2 of U.S. Application No. 11/177,177. It is noted that claim 10 as originally filed herein and claim 2 as originally filed in U.S. Application No. 11/177,177 do not appear to conflict in a manner that calls for a double patenting rejection. Nonetheless, claim 10 as well as claim 1 herein have been amended, and thus are believed to overcome the double patenting rejection.

Claim 5 was objected to due to informalities, and has been amended to correct this deficiency.

Claims 1, 3-7, 10, and 11 were rejected under 35 USC §102(e) as being anticipated by Voigt et al. (6,684,313). These claim rejections are overcome as follows.

Embodiments in accordance with the present invention relate to performing two types of commands and assigning logical devices to logical units in a disk control system:

1. Type I command ("second process command" in claims)

2. Type II command ("first process command" in claims)

Type I commands are "process commands that do not cause in input/output process of data with respect to the LDEVs (logical devices), such as "Report LUN," "Inquiry," or "Read Capacity" and Type II commands are "process commands that do cause an input/output process of data with respect to the LDEVs, such as "Write" (data write command) or "Read" (data read command)." See page 11, lines 3-9. The present invention is directed to performing Type I and II commands, where some process commands may require a logical device assigned to a logical, and some process commands may be performed without a logical device assignment:

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> "These commands [type I commands] are commands requesting information regarding the logical unit, so that even if no logical device is associated with that logical unit, a response to that command can be sent back to the information processing device. Consequently, if a process command is received for a logical unit to which no logical device has been assigned, then limited storage resources can be utilized efficiently without assigning a logical device to that logical unit when receiving such commands. ... In another aspect of the present invention, if the disk control system has received a process command [type II command] for the logical unit, and if a logical device is assigned to the logical unit, a process corresponding to the process command is performed with regard to that logical device, and, if no logical device is assigned to the logical unit, a logical device is assigned to the logical unit and a process corresponding to the process command is performed with regard to that logical device." (Page 5, lines 18-29, page 8-15)

Accordingly, independent claims 1, 10, and 11 recite these features.

Here, while the Voight patent describes automatically assigning logical units to different logical groups, the Voight patent fails to completely teach, explicitly or impliedly, all of the elements of the pending claims:

> "In one feature, any LU's [logical units] not manually assigned to logical groups are deemed to be a default logical group, and when the automatic process assigns the physical storage resources to the LU's the process does this in a manner such that the LU's in the default logical group cannot contend for physical storage resources with the LU's in the other logical groups." (Column 5, lines 24-30)

Specifically, the Voight patent fails to teach that process commands may be performed without assigning logical devices to logical groups. Moreover, nowhere does the Voight patent teach Type I and II process commands, which is one feature of the present invention.

In no sense then, can the Voight patent be understood as intended to:

1. Perform type I process commands without assigning a logical device to a logical unit; and/or

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2. Automatically assign a logical device to a logical unit when performing a type II process command.

Based on the failure of the Voight patent to teach or even suggest each of the elements of the pending claims, it is respectfully asserted that independent claims 1, 10, and 11, and the claims depending therefrom, are patentable. The Section 102 rejection of the claims is believed to be overcome.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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